

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference BP110944/OPS	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI2005/000099	International filing date (day/month/year) 15-02-2005	Priority date (day/month/year) 16-02-2004
International Patent Classification (IPC) or national classification and IPC See Supplemental Box		
Applicant Stora Enso Oyj et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 16-12-2005	Date of completion of this report 26-05-2006
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2005/000099

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Cover sheet

International patent classification (IPC)

B65D 43/02 (2006.01)

B31B 17/00 (2006.01)

B31F 1/00 (2006.01)

B65D 3/06 (2006.01)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2005/000099

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-6 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* 8-9 received by this Authority on 13-04-2006
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages 1-4 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2005/000099

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-12</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-9</u>	YES
	Claims	<u>10-12</u>	NO
Industrial applicability (IA)	Claims	<u>1-12</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

The invention concerns a cup package provided with a lid and a method of manufacturing. One object of the invention is to provide a package that easily can be opened.

Documents cited in the International Search Report:

D1: FR 811 957 A
D2: GB 191400221 A
D3: US 4280652 A
D4: US 3349 941 A
D5: US 4452596 A

Documents D1-D3 disclose cup packages provided with a lid.

Document D4 discloses a compartmented container package provided with a lid.

Document D5 discloses an apparatus for making cups.

Additional document not cited in the International Search Report:

D6: GB 191100947 A

D6 discloses a cup package provided with a lid.

The document D6 is regarded as being the closest prior art to the subject-matter of the claim 1, and shows a cup package made of paper. The lid is partially nested inside the cup. The lid is provided with a flanged upper edge that is turned outwardly to fit over the upper edge of the receptacle (see page 2, lines 10-29).

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

The subject-matter of claim 1 therefore differs from this known package in that both the lid and the cup are provided with a mouth roll. The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

The problem to be solved by the present invention may therefore be regarded as to provide a cup package that is easy to open. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: The mouth rolls acts as stiffeners of the cup and the lid and makes it easier to open and close the package. The mouth rolls also serves as a grip base when lifting the lid off and when closing the package by pressing the lid.

Claims 2-9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

The document D5 is regarded as being the closest prior art to the subject-matter of claim 10, and shows an apparatus for making paperboard cups (see column 5, line 32-column 6, line 52). Wall blanks are wound around mandrels and the overlapping ends are sealed. The cup bottom is inserted and joined to the wall in a conventional manner. The invention according to claim 10 differs from the method known from D5 in that a lid is also formed. However, D3 discloses the making of lids consisting of two pieces. A discoid centre part that is joined to a surrounding sleeve-like frame bearing against the inner surface of the cup (see column 2, line 41-column 3, line 17). The frame has a curled rim (see column 3, line 18-line 25). To ensure that a cup and lid are being manufactured by mutually corresponding operations is a feature that is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill: especially as this difference is not considered to confer any element of inventive significance regarding the problem to be solved (to provide a cup package with a lid that can readily be opened and closed). It would be obvious to a person skilled in the art to apply those features with corresponding effect to the invention

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

according to D5. The subject-matter of claim 10 does therefore not involve an inventive step.

In the description of the application, it is mentioned that it is already known that mouth rolls can be manufactured by moulding (see page 2, lines 4-8). Consequently, the subject matter of claim 11 is considered to involve particular detail executions obvious to a person skilled in the art.

The remaining claim 12 is considered to involve particular detail executions obvious to a person skilled in the art. Therefore, the invention according to claim 12 is not considered to involve an inventive step.

The cited documents D1, D2 and D4 represent the general state of the art.

13-04-2006

8

Claims

1. A cup package made of a fibre-based material and comprising a cup (1) for a product (9) to be packaged and a lid (2) for closing the mouth of the cup, **characterised** in that the cup package can be opened by lifting the lid (2) off and closed by pressing the lid (2) back, the lid (2) is in partially nested relationship with the cup (1), the adhesion between the inner surface of the cup and the lid retaining the lid in position, and in that adjacent mouth rolls (5, 8) are provided at the mouth of the cup and the edge of the lid, the mouth rolls acting as grip bases when the lid is opened.
2. A cup package as defined in claim 1, **characterised** in that the mantle (3) of the cup (1) and the lid (2) expand conically upwards, their conical surfaces lying opposite and being attached to each other.
3. A cup package as defined in claim 1 or 2, **characterised** in that friction and/or compression between the inner surface of the cup (1) and the lid (2) retains the lid in position.
4. A cup package as defined in claim 1 or 2, **characterised** in that at least one of the opposite surfaces of the cup and the lid comprises one or more protrusions (16) in order to provide attachment between the surfaces.
5. A cup package as defined in claim 4, **characterised** in that one of the opposite surfaces of the cup and the lid comprises one or more protrusions (16), the other one comprising one or more recesses (15) for receiving the protrusion in order to provide attachment between the surfaces.
6. A cup package as defined in any of the preceding claims, **characterised** in that the lid (2) has been formed by connecting a principally discoid centre (6) and a surrounding frame (7) bearing against the inner surface of the cup (1), the frame having a mouth roll (8) at its edge.
7. A cup package as defined in any of the preceding claims, **characterised** in that the package has at least three parts, comprising a lowermost larger-sized cup (1), a smaller-sized cup (10) in partially nested relationship with this and an uppermost lid

(2), each of said parts comprising a mouth roll (5, 13, 8) with vertically adjacent mouth rolls acting as grip bases when the parts are separated.

5 8. A cup package as defined in claim 7, **characterised** in being a food package, in which the larger-sized cup (1) contains the main product (5) and the smaller-sized cup (10) contains trimmings (14), such as seasoning or dressing.

10 9. A cup package as defined in any of the preceding claims, **characterised** in that the cup (1) and the lid (2) are made of polymer-coated board, with the polymer coating provided at least on the inner surfaces of the cup and the lid.

15 10. A method for manufacturing a cup package with a lid as defined in any of the preceding claims, **characterised** in that a cup (1) is formed by connecting a principally discoid bottom (4) with a mantle (3) forming the sides of the cup and by equipping the mouth of the cup with a surrounding mouth roll (5), and that a lid (2) is formed for closing the mouth of the cup by connecting a principally discoid centre (6) with a sleeve-like frame (7) partially nested in the cup mantle and by equipping the edge of the frame with a surrounding mouth roll (8), the cup and the lid being substantially manufactured by mutually corresponding operations and the mouth rolls formed in the cup and the lid, which are adjacent each other in the closed package, serving as grip bases as the package is opened.

25 11. A method as defined in claim 10, **characterised** in that mouth rolls (5, 8) are formed in the cup (1) and the lid (2) by mechanical moulding of a fibre-based packaging material.

30 12. A method as defined in claim 10 or 11, **characterised** in that an at least three-part product package is manufactured by forming at least two partially nested cups (1, 10) and a lid (2) closing the mouth of the uppermost cup (10) and by packaging products (5, 14) into the cups in mutually different quantities and/or qualities.